AMENDMENT

IN THE CLAIMS

Cancel claims 1-24 and 33-35 without prejudice or disclaimer. New claims 36-43 are added. The following is a complete claim listing:

1-24. (canceled)

25. (Original) A method of passing a fluid through a manifold of a microchannel device, comprising:
flowing a first fluid stream into a manifold and then through a first channel in a first direction;
flowing a portion of the first fluid stream to a second channel; and
flowing a portion of the first fluid stream through the second channel;
wherein the second channel extends at a nonzero angle relative to the first direction;
wherein the second channel comprises a microchannel and comprises at least one dividing wall that separates the second channel into at least a first and a second subchannel;
wherein the first layer and the manifold are each substantially planar; wherein the manifold is substantially contained within the first layer, and wherein the first layer and the manifold are substantially coplanar, and wherein the first channel is disposed in the first layer and flow through the first channel is substantially parallel to the plane of the first layer;
wherein the first channel and the manifold are about the same height;
wherein the second layer is substantially planar, and wherein the second channel is disposed in the second layer and flow through the second channel is substantially parallel to the plane of the second layer; and

wherein the first layer and the second layer are substantially parallel and the nonzero angle refers to an angle within the second layer.

26. (Original) The method of claim 25 wherein a plate comprising an opening is disposed between the first and second layers and flow from the first layer passes through the opening into the second layer.

27. (Original) The method of claim 26 wherein the first layer comprises multiple adjacent parallel microchannels separated by channel walls; and
wherein the second layer comprises multiple adjacent parallel microchannels separated by continuous channel walls wherein the continuous channel walls traverse the width of the multiple adjacent parallel microchannels in the first layer.

28. (Original) The method of claim 26 wherein the second layer is made from a sheet containing slots.

29. (Original) The method of claim 26 wherein the first layer comprises multiple adjacent parallel microchannels separated by channel walls; and
wherein the second layer comprises multiple adjacent parallel microchannels separated by continuous channel walls;
wherein a portion of the flow through the first layer passes into the second layer where it is redistributed into the microchannels in the first layer.

30. (Original) The method of claim 29 wherein the presence of the second layer tends to equalize flow through the multiple adjacent parallel microchannels in the first layer.

31. (Original) The method of claim 29 wherein the multiple adjacent parallel microchannels comprise a crossbar that forces flow into the second layer; and

wherein, other than contact with the first layer, the second layer does not have any inlets or outlets.

32. (Previously Presented) The method of claim 25 wherein the second layer is adjacent to the first layer and the only flow into the second layer is from the first layer.

33-35. (Canceled)

36. (New) The method of claim 25 wherein the first layer comprises multiple adjacent parallel microchannels separated by channel walls; and

wherein the second layer comprises multiple adjacent parallel microchannels separated by continuous channel walls wherein the continuous channel walls traverse the width of the multiple adjacent parallel microchannels in the first layer.

37. (New) The method of claim 25 wherein the second layer is made from a sheet containing slots.

38. (New) The method of claim 25 wherein the first layer comprises multiple adjacent parallel microchannels separated by channel walls; and

wherein the second layer comprises multiple adjacent parallel microchannels separated by continuous channel walls;

wherein a portion of the flow through the first layer passes into the second layer where it is redistributed into the microchannels in the first layer.

39. (New) The method of claim 38 wherein the presence of the second layer tends to equalize flow through the multiple adjacent parallel microchannels in the first layer.

40. (New) The method of claim 25 wherein the multiple adjacent parallel microchannels comprise a crossbar that forces flow into the second layer; and

wherein, other than contact with the first layer, the second layer does not have any inlets or outlets.

41. (New) The method of claim 25 wherein the second channel comprises a catalyst.

42. (New) The method of claim 25 wherein a chemical reaction occurs in the second channel.

43. (New) The method of claim 42 wherein the chemical reaction comprises a Fischer-Tropsch reaction.